

WHAT IS CLAIMED IS:

1. An implantable immunoisolatory vehicle for providing a biologically active product or function to an individual, the immunoisolatory vehicle comprising:
  - (a) a core comprising living cells dispersed in a biocompatible matrix formed of a hydrogel, said cells being capable of secreting a selected biologically active product or of providing a selected biological function to an individual; and
  - (b) an external diffusional surface jacket surrounding said core formed of a biocompatible hydrogel material free of said cells projecting externally thereof, said jacket having a molecular weight cutoff below the molecular weight of substances essential for immunological rejection of the cells but permitting passage of substances between the individual and core through said jacket required to provide said biological product or function, said core and external jacket forming an interface substantially free of direct ionic bonding and of an intermediate linking layer.